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Communications and Information

DEFENSE TRANSPORTATION SYSTEM (DTS) ENTERPRISE ARCHITECTURE (EA) POLICY AND RESPONSIBILITIES

BY ORDER OF THE DEPUTY COMMANDER
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This instruction establishes enterprise-wide policies and responsibilities for developing and implementing the Defense Transportation System (DTS) Enterprise Architecture (EA).

This instruction implements the architecture-related mandates of:
- Department of Defense Directive (DODD) 4630.5, "Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)"
- Department of Defense Instruction (DODI) 4630.8, "Procedures for Interoperability and Supportability of IT and NSS"
- DODD 8000.1, "Management of DOD Information Resources and IT"
- DODD 8100.01, "Global Information Grid (GIG) Overarching Policy"
- Deputy Secretary of Defense Memorandum U16167-02, "Defense Acquisition," with Attachment 1 "The DOD Acquisition System" and Attachment 2, "Operation of the Defense Acquisition System," dated October 2002

The Information Technology Management Reform Act of 1996 (Clinger-Cohen Act) "assigns responsibility for sound and integrated Information Technology Architecture development, maintenance, and facilitation of implementation," to the Chief Information Officer (CIO). The Office of Management and Budget (OMB) Circular A-130, "Management of Federal Information Resources," defines an EA as "The explicit description and documentation of the current and desired relationships among business and management processes and information technology."

This instruction is applicable to all USTRANSCOM directorates and the Command Support Group (CSG) at Scott Air Force Base (AFB), IL, and the Transportation Component Commands (TCCs) that manage, use, enhance or maintain the DTS. Send instruction comments and suggested improvements on AF Form 847, Recommendation for Change of Publication, to USTRANSCOM/TCJ6-A, 508 Scott Drive, Scott AFB IL 62225-5357.

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1. References and Supporting Information. References, related publications, abbreviations, acronyms, and terms used in this instruction are listed in Attachment 1.

2. DTS EA Purpose

2.1. The USTRANSCOM-developed DTS EA provides a powerful tool for transforming DTS capabilities into a manageable enterprise while promoting interoperability. It documents, describes, and displays the current and target relationships between processes, systems (including projects and initiatives) and technologies.

2.2. The EA reduces ambiguities within the DTS and helps explain its complexities in order to improve the exchange of related information, thereby providing a more efficient and effective means of planning and executing strategic and capital IT investments.

3. DTS EA Structure

3.1. The DTS EA will comply with the Department of Defense (DOD) Architecture Framework and its successor documents for architecture development and integration.

3.2. It consists of three principal enterprise-level architectural views: Operational View (OV), Systems View (SV), and Technical View (TV).

3.2.1. OV – A process description of the tasks and activities, operational elements (including node conductivity description), information flows, and logical data model (LDM) required to accomplish or support enterprise-wide capabilities.

3.2.2. SV - A graphical and textual description of systems, their functionality, performance, physical data model, and interconnections used to satisfy enterprise capabilities**.**

3.2.3. TV – Set of rules governing the arrangement, interaction, and interdependence of system parts or elements, whose purpose is to ensure that a conformant system satisfies a specified set of requirements accompanied by a technical architecture model and standards technology forecast.

3.3. Enterprise-wide missions shape the OV; the OV in turn influences the SV to identify shortfalls and systems requirements, and the SV requirements lead the TV to address a common set of applicable standards. To be consistent and integrated, an architecture description must provide explicit linkages among its various views. The OV describes the nature of all operational processes in detail sufficient to describe the process activities, determine the specific level/type of information exchanged, and the degree of interoperability that is required by the user at all levels. The TV articulates the criteria that govern the compliant implementation of each required IT capability. The SV identifies which systems support the requirement, translates the required degree of interoperability into a set of system functionalities, compares current/postulated implementations with the needed IT capabilities, and ensures compliance with standards addressed in the TV.

3.4. The principal views will document the baseline (as-is) and describe the future (to-be) environment as well as providing sequencing plan(s), addressing both operational and technical environments, for transitioning from the current to the future state. As products supporting the principal views are developed and evolve, they will be subject to configuration management.

4. EA Configuration Management

4.1. The data owner continuously refreshes data supporting the underlying architecture and products to improve support to CIO Program Review Process (CPRP), Enterprise Change Management (ECM), and other related projects. The architectural products and supporting data for individual views (OV, SV, and TV) will be reviewed and validated through the EA Oversight Group (OG) on an annual basis. A comprehensive DTS EA document will be published biannually for information only.

4.2. Modification or amendment to the three views of architectural data will be the responsibility of the Command, Control, Communications and Computer Systems (C4S) Directorate (TCJ-6) CIO Support Division (TCJ6-A) and will be vetted through the EA OG to ensure consistent and equitable focus is placed across the enterprise.

5. EA Administration

5.1. The EA OG is responsible to ensure the EA is updated and coordinated to accurately reflect the direction of the enterprise. The group is to receive progress status updates on all architecture views, and recommend prioritization of associated requirements. Directorates and TCCs are responsible to provide senior-level representation to the EA OG.

5.2. The EA OG is sponsored by the Chief Architect (TCJ6-A). Senior-level representation is provided from the USTRANSCOM directorates and TCCs. Membership is at the O-6/GS-15 level or a designated alternate. Responsibilities of the EA OG are:

5.2.1. Coordinates EA development and maintenance efforts and meeting periodically (in person or through electronic means) at the request of the USTRANSCOM Chief Architect.

5.2.2. Deconflicts the informational requirements and priorities for new architectural efforts, and within and between existing architectures that extend beyond or require modification of the basic requirements set out in the Architecture Framework guidance.

5.2.3. Validates EA products, recommended by the Chief Architect and architecture working group representatives, as authoritatively accurate for enterprise analysis.

5.2.4. Provides guidance and direction for developing an integrated DTS EA and oversees EA implementation in their respective organizations. (Note: Members also facilitate cross-organization coordination on all reviews of the DTS EA or architecture associated products.)

5.2.5. Assigns subject matter experts (SMEs) from their parent organization to subordinate EA teams to develop and or review inputs to the individual architecture views

6. Stakeholders, Roles and Responsibilities

6.1 USTRANSCOM CIO. The CIO is responsible for managing the DTS EA and associated architecture development efforts, including changes and waivers. Responsibilities of the CIO are:

6.1.1. Assigns DTS EA responsibilities, to include establishment of the EA OG.

6.1.2. Budgets and contracts for DTS EA development and maintenance.

6.1.3. Represents the DTS EA to subordinate and ordinate architecture efforts.

6.2. Responsibilities of USTRANSCOM TCJ6-A are:

6.2.1. Executes DTS EA development per USTRANSCOM CIO and Office of the Secretary of Defense (OSD) direction. As the Chief Architect and principal author, TCJ6-A will ensure development and maintenance of the three principal architecture views.

6.2.2. Supports USTRANSCOM CIO review of external architectures for applicability and impact to the DTS EA.

6.2.3. Chairs/sponsors the DTS EA OG:

6.2.4. Ensures timely and accurate input into USTRANSCOM strategic objectives processes related to DTS EA development.

6.2.5. Update the CIO on the progress of the enterprise in accomplishing the goals stated in DTS EA sequencing plan.

6.3. Responsibilities of USTRANSCOM Architecture and Integration Branch (TCJ6-AA) are:

6.3.1. Serves as the lead author and development manager for the DTS EA.

6.3.2. Develops and executes the DTS EA management plan. The management plan contains a detailed work breakdown structure, resource estimates (funding, staffing, and training), performance measurements and management controls for development and maintenance of the DTS EA.

6.3.3. Represents all architecture views and associated issues to the DTS EA OG.

6.3.4. Ensures all DTS EA OG recommendations and changes are accomplished in the DTS EA.

6.3.5. Provides for the independent verification and validation of both the DTS EA products and the processes used to develop the products.

6.3.6. In coordination with DTS mission area and functional domain area planners and architects; develops, identifies, and disseminates recommendations for automated tools that encourage integration, modularity, expandability, simulation, analysis, and re-use of architecture products.

6.3.7. Performs DTS EA liaison functions with agencies both internal and external to the DTS.

6.3.8. Develops strategy to implement the transition of all SPIs and monitor progress of this evolution in accordance with the DTS EA sequencing plan.

6.3.9. Reports on the progress of attaining DTS EA goals, as stated in the sequencing plan, to the Chief Architect.

6.4. Responsibilities of USTRANSCOM Operations and Plans Division (TCJ6-O) are:

6.4.1. Develops and maintains USTRANSCOM-approved commercial products lists and coordinates with TCJ6-A on the list of emerging technology capabilities and products to be discussed in the DTS EA TV.

6.4.2. Assigns computer systems security SME to DTS EA SV and TV development.

6.5. Responsibilities of USTRANSCOM Manpower & Personnel Directorate (TCJ1) are:

6.5.1. Serves as a functional proponent and process owner for all manpower and personnel related issues and requirements. Ensures all items of responsibility are fully addressed in the baseline, target, and sequencing plan products. Ensures SMEs are made available to support architecture development. Coordinates with SMEs external to USTRANSCOM to establish architecture requirements.

6.5.2. Ensures information about respective processes, products, and standards are accurate and reflect USTRANSCOM strategic objectives. Evaluates DTS EA interfaces with USTRANSCOM component architectures and their products.

6.5.3. Provides senior-level representation to the EA OG.

6.6. Responsibilities of USTRANSCOM Intelligence Directorate (TCJ2) are:

6.6.1. Serves as a functional proponent and process owner for all intelligence related issues and requirements. Ensures all items of responsibility are fully addressed in the baseline, target, and sequencing plan products. Ensures SMEs are made available to support architecture development. Coordinates with SMEs external to USTRANSCOM to address intelligence related architecture requirements.

6.6.2. USTRANSCOM Senior Intelligence Officer (SIO) plans, executes, and maintains Collateral (SECRET) and TOP SECRET Sensitive Compartmented Information (TS-SCI) Intelligence Data Handling Systems (IDHS). As the SIO, ensures the interoperability of the DTS EA with the DOD Intelligence Information Systems (DODIIS) EA and its objectives.

6.6.3. Documents information assurance (IA) requirements for IDHS resources to support the Information Security Systems Management (ISSM) function.

6.6.4. Ensures major DODIIS programs documented in the USTRANSCOM Site Transition Plan (STP) are fully represented in the DTS EA.

6.6.5. Ensures information about respective processes, products, and standards is accurate and reflects USTRANSCOM strategic objectives. Evaluates DTS EA interfaces with USTRANSCOM component architectures and their products.

6.6.6. Provides senior-level representation to the EA OG.

6.7. Responsibilities of USTRANSCOM Operations Directorate (TCJ3) are:

6.7.1. Serves as a functional proponent and process owner for issues and requirements related to the command and control (C2) of assigned forces and the execution USTRANSCOM's global transportation mission. Ensures all items of responsibility are fully addressed in the baseline, target, and sequencing plan products. Ensures SMEs are made available to support architecture development. Coordinates with SMEs external to USTRANSCOM to establish architecture requirements.

6.7.2. Ensures information about respective processes, products, and standards are accurate and reflect USTRANSCOM strategic objectives. Evaluates DTS EA interfaces with USTRANSCOM component architectures and their products.

6.7.3. Provides senior-level representation to the EA OG.

6.8. Responsibilities of USTRANSCOM Strategy, Plans, Policy and Programs Directorate (TCJ5) are:

6.8.1. Serves as a functional proponent and process owner for issues and requirements related to USTRANSCOM Strategy, Plans, Policy and Strategic Programs. Ensures all items of responsibility are fully addressed in the baseline, target, and sequencing plan products. Ensures SMEs are made available to support architecture development. Coordinates with SMEs external to USTRANSCOM to establish architecture requirements.

6.8.2. Ensures information about respective processes, products, and standards are accurate and reflect USTRANSCOM strategic objectives. Evaluates DTS EA interfaces with USTRANSCOM component architectures and their products.

6.8.3. Provide senior-level representation to the EA OG.

6.9. Responsibilities of USTRANSCOM Program Analysis & Financial Management Directorate (TCJ8) are:

6.9.1. Serves as a functional proponent and process owner for all financial related issues and requirements. Ensures all items of responsibility are fully addressed in the baseline, target, and sequencing plan products. Ensures SMEs are made available to support architecture development. Coordinates with SMEs external to USTRANSCOM to establish architecture requirements.

6.9.2. Ensure information about respective processes, products, and standards are accurate and reflect USTRANSCOM strategic objectives. Evaluates DTS EA interfaces with USTRANSCOM component architectures and their products.

6.9.3. Provide senior-level representation to the EA OG.

6.10. Responsibilities of the Transportation Component Commands (TCCs) and CSGs are:

6.10.1. Ensures information regarding respective component architecture(s), processes, products, and standards are accurate and reflect USTRANSCOM strategic objectives. Validates DTS EA interfaces with TCC architectures and products.

6.10.2. Ensures SMEs are made available to support architecture development.

6.10.3. Provides senior-level representation to the EA OG.

6.11. Ensure all Functional Process Improvement (FPI) initiatives shall baseline using the DTS EA. Subject to concurrence by USTRANSCOM Chief of Staff – Acquisition Office (TCAQ), and subject to the Federal Acquisition Regulation and any other controlling authorities, to the extent permissible, TCAQ shall incorporate into all DTS EA related contracts, provisions substantially incorporating the covenants set out in the following paragraph:

"Contractor shall use the Defense Transportation System (DTS) Operational View (OV) as baseline for evaluating current and proposed processes identified in this statement of work. The contractor shall provide the revised process to be included back into the OV, identifying the relationship of their developed activities and information flows to those of the DTS OV. The contractor shall comply with Corporate Resource Information Source (CRIS) Logical Data Model (LDM) or provide rationale supporting a waiver. The contractor shall provide information flows with accompanying narratives describing the specific business process and associated business rules to the USTRANSCOM TCJ6 Architecture/Integration Branch. The contractor shall also provide Information Exchange Requirements (IERs) (known as the Operational View (OV-3)) for information exchanged with other DTS automated information systems in tabular format. This IER data must include all CRIS LDM key attributes, plus the following non-key attributes: planned operational, operational, and planned obsolescence lifecycle dates. The narratives, business rules, and IERs shall be used as a baseline case for updating or expanding the DTS OV."

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Director, Command, Control, Communications
and Computer Systems

Attachment
Glossary of References
and Supporting Information

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

Department of Defense Directive (DODD) 4630.5, "Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)"

Department of Defense Instruction (DODI) 4630.8, "Procedures for Interoperability and Supportability of IT and NSS"

DODD 8000.1, "Management of DOD Information Resources and IT"

DODD 8100.01, "Global Information Grid (GIG) Overarching Policy"

Deputy Secretary of Defense Memorandum U16167-02, "Defense Acquisition," with Attachment 1 "The DOD Acquisition System" and Attachment 2, "Operation of the Defense Acquisition System," dated October 2002

National Defense Authorization Act for Fiscal Year 1996, Division E, The Information Technology Management Reform Act of 1996 (Clinger-Cohen Act)

Information Technology: A Framework for Assessing and Improving Enterprise Architecture Management (Version 1.1), GAO-03-584G, April 2003

DOD Architecture Framework, August 2003

DOD Information Technology Management Strategic Plan (ITMSP), August 1997

Global Information Grid (GIG) Architecture (Version 2), May 2003

Joint Vision 2020 (JV 2020)

Title 10, U.S.C.

Abbreviations and Acronyms

C4S – Command, Control, Communications and Computer Systems

C4ISR – Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance

CIO – Chief Information Officer

CRIS – Corporate Resource Information Source

CSG – Command Support Group

DOD – Department of Defense

DODD – Department of Defense Directive

DODI – Department of Defense Instruction

DODIIS – DOD Intelligence Information Systems

DTS – Defense Transportation System

EA – Enterprise Architecture

ECM – Enterprise Change Management

FPI – Functional Process Improvement

GIG – Global Information Grid

IA – information assurance

IDHS – Intelligence Data Handling Systems

IER – Information Exchange Requirement

ISSM – Information Security Systems Management

IT – Information Technology

LDM – Logical Data Model

NSS – National Security Systems

OG – Oversight Group

OSD – Office of the Secretary of Defense

OV – Operational View

SCI – Sensitive Compartmented Information

SIO – Senior Intelligence Officer

SPI – Systems, Projects, and Initiatives

SME – Subject Matter Expert

STP – Site Transition Plan

SV – Systems View

TCC – Transportation Component Command

TCCS – USTRANSCOM Chief of Staff

TCAQ – Chief of Staff – Acquisition Office

TCJ1 – Manpower & Personnel Directorate

TCJ2 – Intelligence Directorate

TCJ3 – Operations Directorate

TCJ5 – Strategy, Plans, Policy and Programs Directorate

TCJ-6 – Command, Control, Communications and Computer Systems (C4S) Directorate

TCJ6-A – CIO Support Division

TCJ6-AA – Architecture and Integration Branch

TCJ6-O – Operations and Plans Division

TCJ8 – Program Analysis & Financial Management

TS – TOP SECRET

TV – Technical View

USTRANSCOMI – USTRANSCOM Instruction

USTRANSCOM – United States Transportation Command

Terms

Architecture – An architecture is the structure of components, their relationships, and the principles and guidelines governing their design and evolution over time.

Architecture description – A representation of a defined domain, as of a current or future point in time, in terms of its component parts, what those parts do, how the parts relate to each other, and the rules and constraints governing them. Within the DOD Architecture Framework, architectures are described in terms of three views: operational (OV), systems (SV), and technical standards (TV). Composed of architecture products that are interrelated within each view and are interrelated across views. Architecture products are those graphical, textual, and tabular items that are developed in the course of gathering architecture data, identifying their composition into related architecture components or composites, and modeling the relationships among those composites to describe characteristics pertinent to the architecture's purpose.

Defense Transportation System – That portion of the Nation's transportation infrastructure that supports Department of Defense common-user transportation needs across the range of military operations. It consists of those common-user military and commercial assets, services, and systems organic to, contracted for, or controlled by the Department of Defense.

Enterprise Architecture – Comprehensive depiction of functional processes, enabling information technology, and supporting technical standards for the DTS community.

Interoperability – Interoperability is the ability of systems, units or forces to provide data, information, materiel, and services to and accept the same from other systems, units, or forces and to use the data, information, materiel, and services so exchanged to enable them to operate effectively together.

USTRANSCOM – HQ USTRANSCOM, the Transportation Component Commands (TCCs)--Air Mobility Command (AMC), Military Sealift Command (MSC), and Military Surface Deployment and Distribution Command (MSDDC)--and Command Support Group (CSG).

USTRANSCOM Enterprise – Those processes, people, assets, and IT systems managed by USTRANSCOM and its component commands. A subset of the Defense Transportation System.